

EduSahara™ Learning Center Assignment**Grade : Class IX, ICSE****Chapter : Trigonometrical Ratios****Name : Trigonometric Expression Evaluation**

1. $\cot 60^\circ \cot 30^\circ - \operatorname{cosec} 30^\circ \cos 30^\circ =$

(i) $(3 - \sqrt{3})$ (ii) $(1 - \sqrt[4]{3})$ (iii) $(1 - \sqrt{3})$

(iv) $(-1 - \sqrt{3})$ (v) $(1 - 3)$

2. $\frac{\sin 0^\circ \operatorname{cosec} 60^\circ - \cos 60^\circ \cot 90^\circ}{\sec 30^\circ \sin 0^\circ \cot 45^\circ + \operatorname{cosec} 90^\circ \cot 30^\circ \operatorname{cosec} 30^\circ} =$

(i) (-3) (ii) 1 (iii) 0

(iv) (-1) (v) 3

3. $\frac{\sin 59^\circ}{\cos 31^\circ} =$

(i) 1 (ii) 0 (iii) $\tan 31^\circ$ (iv) -1 (v) $\tan 59^\circ$

4. $\frac{\cos 78^\circ}{\sin 12^\circ} =$

(i) 1 (ii) $\tan 12^\circ$ (iii) $\tan 78^\circ$ (iv) 0 (v) -1

5. $\frac{\tan 62^\circ}{\cot 28^\circ} =$

(i) $\tan 28^\circ$ (ii) -1 (iii) 0 (iv) 1 (v) $\tan 62^\circ$

6. $\frac{\cot 33^\circ}{\tan 57^\circ} =$

(i) $\tan 33^\circ$ (ii) 0 (iii) -1 (iv) 1 (v) $\tan 57^\circ$

7. $\frac{\sec 78^\circ}{\operatorname{cosec} 12^\circ} =$

(i) -1 (ii) $\tan 78^\circ$ (iii) 1 (iv) 0 (v) $\tan 12^\circ$

8. $\frac{\operatorname{cosec} 19^\circ}{\sec 71^\circ} =$

(i) 1 (ii) $\tan 19^\circ$ (iii) $\tan 71^\circ$ (iv) 0 (v) -1

9. $\sin 2^\circ \cos 64^\circ =$

$$\cos 88^\circ \sin 26^\circ$$

(i) -1 (ii) 0 (iii) 1 (iv) $\tan 2^\circ$ (v) $\tan 64^\circ$

10. $\frac{\cos 59^\circ \sin 65^\circ}{\sin 31^\circ \cos 25^\circ} =$

(i) $\tan 65^\circ$ (ii) $\tan 59^\circ$ (iii) 0 (iv) 1 (v) -1

11. $\frac{\tan 5^\circ \cot 42^\circ}{\cot 85^\circ \tan 48^\circ} =$

(i) 1 (ii) $\tan 42^\circ$ (iii) $\tan 5^\circ$ (iv) -1 (v) 0

12. $\frac{\cot 71^\circ \tan 49^\circ}{\tan 19^\circ \cot 41^\circ} =$

(i) $\tan 49^\circ$ (ii) $\tan 71^\circ$ (iii) 1 (iv) 0 (v) -1

13. $\frac{\sec 6^\circ \operatorname{cosec} 32^\circ}{\operatorname{cosec} 84^\circ \sec 58^\circ} =$

(i) $\tan 32^\circ$ (ii) $\tan 6^\circ$ (iii) -1 (iv) 0 (v) 1

14. $\frac{\operatorname{cosec} 13^\circ \sec 50^\circ}{\sec 77^\circ \operatorname{cosec} 40^\circ} =$

(i) 1 (ii) -1 (iii) $\tan 13^\circ$ (iv) 0 (v) $\tan 50^\circ$

15. $\sin 32^\circ - \cos 58^\circ =$

(i) 1 (ii) $2 \sin 58^\circ$ (iii) -1 (iv) $2 \sin 32^\circ$ (v) 0

16. $\cos 68^\circ - \sin 22^\circ =$

(i) $2 \sin 22^\circ$ (ii) $2 \sin 68^\circ$ (iii) 1 (iv) 0 (v) -1

17. $\tan 70^\circ - \cot 20^\circ =$

(i) -1 (ii) $2 \sin 70^\circ$ (iii) $2 \sin 20^\circ$ (iv) 0 (v) 1

18. $\cot 5^\circ - \tan 85^\circ =$

(i) 1 (ii) $2 \sin 85^\circ$ (iii) $2 \sin 5^\circ$ (iv) -1 (v) 0

19. $\sec 76^\circ - \operatorname{cosec} 14^\circ =$

(i) $2 \sin 76^\circ$ (ii) 0 (iii) -1 (iv) $2 \sin 14^\circ$ (v) 1

20. $\operatorname{cosec} 62^\circ - \sec 28^\circ =$

(i) 1 (ii) -1 (iii) $2 \sin 28^\circ$ (iv) $2 \sin 62^\circ$ (v) 0

21. $\sin 7^\circ \cos 71^\circ - \cos 83^\circ \sin 19^\circ =$

(i) 0 (ii) $2 \sin 7^\circ$ (iii) 1 (iv) $2 \sin 71^\circ$ (v) -1

22. $\cos 60^\circ \sin 84^\circ - \sin 30^\circ \cos 6^\circ =$

(i) -1 (ii) $2 \sin 60^\circ$ (iii) $2 \sin 84^\circ$ (iv) 0 (v) 1

23. $\tan 75^\circ \cot 48^\circ - \cot 15^\circ \tan 42^\circ =$

(i) $2 \sin 48^\circ$ (ii) $2 \sin 75^\circ$ (iii) -1 (iv) 0 (v) 1

24. $\cot 67^\circ \tan 75^\circ - \tan 23^\circ \cot 15^\circ =$

(i) $2 \sin 75^\circ$ (ii) 0 (iii) $2 \sin 67^\circ$ (iv) -1 (v) 1

25. $\sec 2^\circ \operatorname{cosec} 26^\circ - \operatorname{cosec} 88^\circ \sec 64^\circ =$

(i) 1 (ii) $2 \sin 26^\circ$ (iii) $2 \sin 2^\circ$ (iv) -1 (v) 0

26. $\operatorname{cosec} 18^\circ \sec 11^\circ - \sec 72^\circ \operatorname{cosec} 79^\circ =$

(i) 1 (ii) $2 \sin 11^\circ$ (iii) -1 (iv) $2 \sin 18^\circ$ (v) 0

27. Find the value of $\tan 25^\circ \tan 60^\circ \tan 65^\circ \tan 30^\circ$

(i) 2 (ii) undefined (iii) 0 (iv) -1 (v) 1

28. Find the value of $\cot 25^\circ \cot 75^\circ \cot 65^\circ \cot 15^\circ$

(i) 0 (ii) 2 (iii) 1 (iv) -1 (v) undefined

29. $\sin 55^\circ + \cos 65^\circ =$

(i) $\cos 55^\circ + \sin 65^\circ$

(ii) $\sin 55^\circ + \sin 65^\circ$

(iii) $\cos 35^\circ + \cos 25^\circ$

(iv) $\cos 35^\circ + \sin 25^\circ$

30. $\cos 48^\circ + \sin 32^\circ =$

(i) $\sin 48^\circ + \cos 32^\circ$

(ii) $\cos 48^\circ + \cos 32^\circ$

(iii) $\sin 42^\circ + \sin 58^\circ$

(iv) $\sin 42^\circ + \cos 58^\circ$

31. $\tan 45^\circ + \cot 62^\circ =$

(i) $\cot 45^\circ + \tan 62^\circ$

(ii) $\tan 45^\circ + \tan 62^\circ$

(iii) $\cot 45^\circ + \cot 28^\circ$

(iv) $\cot 45^\circ + \tan 28^\circ$

32. $\cot 53^\circ + \tan 25^\circ =$

(i) $\tan 53^\circ + \cot 25^\circ$

(ii) $\cot 53^\circ + \cot 25^\circ$

(iii) $\tan 37^\circ + \cot 65^\circ$

(iv) $\tan 37^\circ + \tan 65^\circ$

33. $\sec 19^\circ + \operatorname{cosec} 55^\circ =$

(i) $\sec 19^\circ + \sec 55^\circ$

(ii) $\operatorname{cosec} 71^\circ + \sec 35^\circ$

(iii) $\operatorname{cosec} 71^\circ + \operatorname{cosec} 35^\circ$

(iv) $\operatorname{cosec} 19^\circ + \sec 55^\circ$

34. $\operatorname{cosec} 32^\circ + \sec 76^\circ =$

(i) $\sec 58^\circ + \operatorname{cosec} 14^\circ$

(ii) $\sec 32^\circ + \operatorname{cosec} 76^\circ$

(iii) $\sec 58^\circ + \sec 14^\circ$

(iv) $\operatorname{cosec} 32^\circ + \operatorname{cosec} 76^\circ$

Assignment Key

- 1) (iii)
- 2) (iii)
- 3) (i)
- 4) (i)
- 5) (iv)
- 6) (iv)
- 7) (iii)
- 8) (i)
- 9) (iii)
- 10) (iv)
- 11) (i)
- 12) (iii)
- 13) (v)
- 14) (i)
- 15) (v)
- 16) (iv)
- 17) (iv)
- 18) (v)
- 19) (ii)
- 20) (v)
- 21) (i)
- 22) (iv)
- 23) (iv)
- 24) (ii)
- 25) (v)
- 26) (v)
- 27) (v)
- 28) (iii)
- 29) (iv)
- 30) (iv)
- 31) (iv)
- 32) (iii)
- 33) (ii)
- 34) (i)